



5.0 MAR 2017

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION
CITY VIEW PLAZA, SUITE 7000
#48 165 RD. KM 1.2
GUAYNABO, PR 00968-8069

CERTIFIED MAIL /RETURN RECEIPT REQUESTED

Article Number: 7015 0920 0000 8688 5153

Mr. Alvin E. Crespo, Director
Environmental Health and Safety
Bristol-Myers Squibb Manufacturing Company
Humacao Operations
P.O. Box 609
Humacao, Puerto Rico, 00792-1255

Re: Technical Review of the *November 2016 Technical Memorandum (TM) Proposed Sampling Program Offsite Groundwater- South of Facility* for the Bristol-Myers Squibb Manufacturing Company, Humacao, Puerto Rico
EPA ID Number: PRD 090021056

Dear Mr. Crespo:

The United States Environmental Protection Agency-Region 2 (EPA) has reviewed the *November 21, 2016 Technical Memorandum Proposed Sampling Program Offsite Groundwater- South of Facility* (Technical Memorandum) for the Bristol-Myers Squibb Manufacturing Company (BMSMC) for its facility in Humacao, Puerto Rico. The Technical Memorandum was submitted by BMSMC in response to the comments issued by EPA and the Puerto Rico Environmental Quality Board on the June 2016 *Release Assessment Phase 2A Sampling and Analysis Plan (Phase 2A SAP): Offsite Groundwater South of Facility* on the letter dated September 15, 2016.

The TM addresses EPA's concerns that BMSMC had prematurely reduced the target analyte list for the offsite monitoring wells installed during the Phase 2A Field Program. BMSMC shall continue to use the target analyte list specified in the Phase I SAP. Further details and rationale are provided in the enclosed comments.

Please provide your response to the enclosed comments within 60 days of receipt of this letter. If you have any questions regarding this correspondence, please contact Socorro Martinez of my staff at (787) 977-5886 or via email at martinez.socorro@epa.gov.

Sincerely,

Carmen R. Guerrero Pérez
Director
Caribbean Environmental Protection Division

cc: José Roque Julia, Acting Manager,
Land Pollution Control Program, PREQB

Technical Review of the Technical Memorandum Proposed Sampling Program Offsite Groundwater-South of Facility
Bristol-Myers Squibb Manufacturing Company
Humacao, Puerto Rico

I. GENERAL COMMENT

1. BMSMC reviewed the soil and groundwater samples collected along the downgradient southern perimeter of the facility and compared the detected results to the May 2016 U.S. EPA residential-based tapwater or protection of groundwater screening levels. This comparison indicated that eight target analytes exceeded the aforementioned screening levels: benzene, benzaldehyde, dieldrin, 1-4-dioxane, methyl-tert butyl ether (MTBE), tert-amyl alcohol, naphthalene, and C11-22 aromatics. Also, BMSMC recommended including benzo(a)pyrene, 1,2-dichloroethane, chloroform, dichlorodifluoromethane, and vinyl chloride since they were detected in the offsite wells above the U.S. EPA residential-based tapwater screening levels. Although BMSMC's approach to identifying the primary contaminants of potential concern (COPCs) for offsite groundwater monitoring is reasonable, EPA does not agree that a reduction of the target analyte list is appropriate for the following reasons:
 - The root cause for the January 2016 Notification of Potentially Newly Identified Release Letter and the subsequent February 2016 Release Assessment was the presence of additional compounds that were detected in groundwater but not reported in the sample results section of the laboratory report. It is recognized that BMSMC is conducting an "at risk" expedited Release Assessment to correct this oversight and adhere to Module III.C of BMSMC's Final RCRA Hazardous Waste Treatment and Storage Permit No. PRD090021056. However, U.S. EPA is very concerned that by reducing the target analyte list too soon during the investigation phase of the Release Assessment, BMSMC is repeating the same mistake that it is attempting to remedy. It is important to clarify that U.S. EPA is recommending the analysis for the full target analyte list in the analytical methods to mitigate this root cause. It is a U.S. EPA priority to make sure this Release Assessment gathers and evaluates all the relevant data this time around.
 - It is premature to reduce the target analyte lists as the Release Assessment data validation reports have not yet been approved by U.S. EPA and finalized. Also, note that U.S. EPA is in the process of conducting 10% third party data validation review of the Release Assessment data validation reports and the resulting comments may result in qualifier changes which will need to be updated and accurately reflected in the tables and figures of the technical memorandum.
 - A review of the reporting limits (RLs) of the sample results for the groundwater samples collected along the downgradient southern perimeter of the BMSMC facility indicates that 13 volatile organic compounds (VOCs), six polycyclic aromatic hydrocarbons (PAHs), 17 semi volatile organic compounds (SVOCs), three aliphatic/aromatic hydrocarbon ranges, and six pesticides were non-detect but the RLs were above residential-based tapwater screening levels (refer to Table 1 of the technical memorandum). In addition, the RLs for 26 VOCs, seven PAHs, 23 SVOCs, four aliphatic/aromatic hydrocarbon ranges, and six pesticides are above the U.S. EPA Protection of Groundwater Screening Levels (refer to Table 2 of the

technical memorandum). Since the RLs are greater than the screening levels, it is not appropriate to exclude these compounds from the target analyte list.

- Benzene, benzo(a)pyrene, naphthalene, C9-C10 Aromatics and C11-C22 Aromatics were identified by BSMC as COPCs. These compounds are all petroleum constituents and since these compounds have been identified as COPCs it is not appropriate to exclude other petroleum constituents from the target analyte list. To adequately characterize total petroleum hydrocarbons (TPH), the full analyte lists for Benzene, Toluene, Ethylbenzene, and Xylene (BTEX), PAHs, and TPH aliphatic/aromatic hydrocarbon analyses should be reported by the laboratory.